

CHICAGO TRANSIT AUTHORITY
DETAIL SPECIFICATION
FOR
DOOR CONTROL UNIT SOFTWARE:
UPDATE THE CLOSING FORCE.
SPECIFICATION NO. 8714

1. SCOPE

- 1.1. This specification will describe the requirements for the development, testing, delivery, and limited installation (see section 4.2.6 below) of a complete and fully operational software update for the door system on the CTA's 5000 Series Railcars.
- 1.2. The software update will allow the door to push harder and longer to overcome higher level of friction observed during the winter.

2. GENERAL REQUIREMENTS

- 2.1. The requirements covered in this specification are the minimum required by the CTA. Any suggestions, recommendations, and other requirements from the Contractor will be considered by the CTA.
- 2.2. The Contractor must be an authorized distributor of Wabtec Corporation, Door System products.
- 2.3. Software Development Plan and Schedule: The Contractor must submit a software development plan and schedule for review and approval by the CTA four weeks following contract award. This plan must include submittals, check points, testing, deliveries, meeting dates, etc. The plan must identify key personnel, resources, and subcontractors, etc.

3. CONTRACTOR REQUIREMENTS

- 3.1. The potential Contractor or manufacturer must be a professional business entity with at least five (5) years' experience developing, testing, delivering, and installing Wabtec Corporation Door System Software. The CTA requires the potential Contractor bid response package, or within five (5) business days of CTA request, contain documentation meeting these requirements.

4. DETAILED REQUIREMENTS

4.1. The Wabtec software update must change the following features or characteristics:

4.1.1. Update the parameter “side door closing force” to 45 lbs. for the Door Control Unit.

4.1.2. This modification involves only the Door Control Unit Application and would affect the behavior of the door in the “Non-Recycling Distance”, meaning the first few inches from the door fully open position when the door starts to close.

4.2. In addition to updating the parameters listed in section 4.1, the following activities must also be performed:

4.2.1. Perform simulations to verify that the change required in section 4.1.1 will not have a detrimental effect on the door system and their expected life.

4.2.2. Perform all necessary software development tasks required to make the software parameter changes.

4.2.3. Update all software documents, including detailed software installation instructions, and deliver these updated documents to the CTA.

4.2.4. Perform testing to verify that the software update functions as intended and no unintended failures were introduced into the software revision.

4.2.5. Perform regression testing to ensure that the updated door system software still performs correctly.

4.2.6. The Contractor will deliver the software update to the CTA and install the updated software on the 5000-Series Rail Car.

5. ON SITE TESTING

5.1. Testing Plan: The Contractor must make arrangements with the CTA for on-site performance tests of the software at a time suitable for all involved parties. Thirty (30) days prior to the start of testing, the Contractor must submit a test schedule and proposed test procedure outlining all performance tests and any other applicable tests to be performed on CTA property.

5.2. Test condition requirements and the testing plan must be presented to the CTA for review and concurrence.

5.3. The Contractor must perform a complete demonstration/validation of the update is functional as intended of the software changes.

5.4. Any applicable test must be repeated if the software fails to pass a given test.

6. SAFETY REQUIREMENTS

- 6.1. Where applicable, the Contractor must submit any Safety Process Plans detailing safety requirements when using the software.

7. WARRANTY INFORMATION

- 7.1. The software must carry a manufacturer guarantee to be free from defects in material and workmanship for the standard warranty period of no less than 1 year.
- 7.2. The Contractor agrees to promptly correct any issues found due to failure of the software to properly function as required by this contract or due to the introduction of unintended software “bugs” that may develop within the standard warranty period. Additionally, if such “bugs” cause subsequent damage to any hardware components, those components shall be replaced with new components at no charge to the CTA. The contractor will be given the opportunity to determine if the fault is due to the software or another determining factor causing the damage.
- 7.3. Contractor shall provide appropriate support contact telephone numbers to the CTA contact person or their designee as listed in the contract Special Conditions. Support will be provided via telephone, Internet based Web site and Email response to questions and error messages.

8. ADDITIONAL INFORMATION FOR POTENTIAL CONTRACTORS

- 8.1. CTA does not currently have access rights to the source code and necessary compilers to perform this software upgrade.

DISTRIBUTION: G.M., Engineering and Technical Services - Rail
Chief Engineer, Engineering and Technical Services - Rail
Asst. Chief Engineer, Engineering and Technical Services - Rail
Sr. Mgr., Engineering and Technical Services - Rail

DS/ds – Initial spec – 09/16/2026